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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/772,130	CHEN, JUN	
	Examiner	Art Unit	
	JASON K. LIN	2425	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 April 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,5,6,8-16,25-33,36 and 37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,5,6,8-16,25-33,36 and 37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is responsive to application No. 10/772,130 filed on 04/09/2009. **Claims 2, 4, and 7** are cancelled and **Claims 1, 3, 5, 6, 8-16, 25-33, and 36-37** are pending and have been examined

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/09/2009 has been entered.

Response to Arguments

3. Applicant's arguments with respect to **Claims 1, 3, 5, 6, 8-16, 25-33, and 36-37** have been considered but are moot in view of the new ground(s) of rejection. However, some of applicant's remark(s) are to be addressed.

A) On Paragraph 0029, Applicant asserts that "both D'Souza and Jerding'982 do not disclose 'managing place of the one or more windows displayed on the display device' 'automatically and without the user intervention'..." In response, the examiner respectfully disagrees. Col 7: line 40 – Col 8: line 4, Col 6: lines 1-8 of Jerding'982 teaches presenting applications in only a portion of the display while another service is presented in another portion of the display. The SAM Fig.2, 37 overlays the email application over the current TV program (or any existing service or application). So the

email application can be overlaid on top of an underlying program in full screen mode. It is inherent that each application here has its own window for the overlaying and displaying of content. Col 3: lines 23-27 teaches that the SAM is in charge of the definition, initiation, activation and as taught in the previously cited paragraphs, applications are presented in portions of the display where the areas the application is displayed in can be defined and managed by the definition and activation by the SAM. Applications can also displayed on top of other applications. Therefore, the SAM can manage applications to be displayed, but not solely limited to, on defined locations of the screen, as well as on top of other applications, effectively managing place of one or more windows on a display device. As can be seen, the SAM handles the definition of where the application is placed in the location on the screen and whether or not it is displayed on top of another application so therefore, it meets the current limitation of managing place of one or more windows displayed.

B) On Paragraph 0042-0043, 0046, 0058-0059, 0062, Applicant asserts that "the examiner appears to implicitly equate the 'editorial content item' in D'Souza with the 'content' in the claims… Therefore, D'Souza at most discloses an application launcher to launch different editorial contents but such editorial content is not EPG data." In response the examiner respectfully disagrees. The combination of Knudson'823 and D'Souza teaches these claimed limitations. Knudson'823 used as base taught different media type contents displayed on an EPG (Fig.10) that could be selected and provided to the user. It already taught different content displayed on an EPG. It, however, did not explicitly teach in depth the use of a virtual tuner to handle all the management for

the provision of content. This was what D'Souza was brought in to explicitly teach. D'Souza taught the use of a virtual tuner to handle management for the provision of content. In response to editorial contents is not EPG data, the examiner respectfully disagrees. EPG content is merely just content that is displayed on an EPG while editorial content is of the same type of content, but might not necessarily be displayed on an EPG of D'Souza, so it does not warrant that the virtual tuner of D'Souza would be unable to handle/manage the display of content of Knudson'823. However, both contents are the same, but might be displayed via different mediums. However, Knudson'823 teaches the display of contents on an EPG, but did not teach that the display of content was handled/managed by a virtual tuner for which D'Souza was brought in to teach. The combination of both Knudson'823 and D'Souza teaches the claimed limitations and are combinable since content presented in Knudson'823 could be handled by the virtual tuner in D'Souza to be launched and displayed.

C) On Paragraph 0074-0075, Applicant asserts that asserts that "the examiner appears to implicitly equate the 'editorial content item' in D'Souza with the 'content' in the claims… Therefore, D'Souza at most discloses an application launcher to launch different editorial contents but such editorial content is not EPG data." In response the examiner respectfully disagrees. Please see examiner's response in Part (B) above. Hassel like Knudson'823 as reasoned above already taught a plurality of content displayed on an EPG (Fig.5b) that could be selected and provided to the user, but did not explicitly teach handling/managing display of content by a virtual tuner for which D'Souza was brought in to teach.

Therefore, in combination the claimed limitations are taught by the combined references of record.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. **Claims 1, 5, 6, and 8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Knudson (US 7,254,823) herein after referred to as Knudson'823, in view of D'Souza et al. (US 2006/0117348), in view of Jerding et al. (US 6,792,616) herein after referred to as Jerding'616, in view of Jerding (US 6,738,982) herein after referred to as Jerding'982, in view of Houghton et al. (US 2005/0021609), and further in view of Hassell et al (2007/0033615).

Consider **claim 1,** Knudson'823 teaches receiving, by a client, Electronic Programming Guide (EPG) data for display (Fig.10), wherein:

EPG data originates from a server (Col 4: lines 33-35, Col 5: lines 11-17);

EPG data is processed by the server into a suitable form for storage and processed on the client (Col 6: lines 29-51, Col 5: lines 11-17, Col 3: lines 61-64 teaches processing and storage of EPG data by the server. Col 5: lines 5-7, 50-65, Col 6: lines 46-51 teaches processing of EPG data at the client);

outputting, by the client, a EPG including a plurality of representations of a plurality of content for simultaneous display by the client (Fig.10; Col 6: lines 12-19, Col 7: line 63 - Col 8: line 6, Col 9: lines 5-14), wherein:

the EPG is configured to form one or more events in response to a user interaction with one or more said representations (Col 9: lines 5-14, Col 5: lines 43-46);

Knudson'823 does not explicitly teach a client which is a device configured to provide a virtual tuner function;

the client includes a plurality of applications;

one or more said content is provided for output by a respective said application; and

form one or more events in response to a user interaction with one or more said representations, wherein the one or more events are based on information other than application identification information originating from the server;

executing, by the client, a virtual tuner on the client to manage execution of each said plurality of applications to provide respective said content represented by the EPG in response to the events formed utilizing the EPG, said virtual tuner utilizing an application identification table that includes a listing of one or more applications to enable execution of each of said plurality of applications, the executing comprising managing a lifecycle of each said

application to output respective said content represented by the EPG automatically and without the user intervention,

wherein the lifecycle includes:

launching the said application;

rendering the respective said content represented by the EPG on respective windows that are displayed on a display device, each window being utilized to display an output for the said content executed by the respective said application;

managing one or more windows that are displayed on a display device, the managing including managing place of the one or more windows displayed on the display device; and

terminating the said application.

In an analogous art, D'Souza teaches a client which is a device configured to provide a virtual tuner function (Paragraph 0029, 0037-0038);

the client includes a plurality of applications (Software programs 214, 216, 218, 220 – Fig.2; Paragraph 0029-0030, 0037-0038);

one or more said content is provided for output by a respective said application (Paragraph 0037-0038); and

form one or more events in response to a user interaction with one or more representations, wherein the one or more events are based on information

other than application identification information originating from the server (Paragraph 0029, 0037-0038);

executing, by the client, a virtual tuner on the client to manage execution of each said plurality of applications to provide respective said content represented by the guide in response to the events formed utilizing the guide (Knudson'823 - Col 9: lines 5-14, Col 5: lines 43-46; D'Souza - application launcher 220-Fig.2; Paragraph 0029, 0037-0038 teaches software which manages the execution of each of the applications in response to events formed utilizing the guide).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify Knudson'823s system to include a client which is a device configured to provide a virtual tuner function; the client includes a plurality of applications; one or more said content is provided for output by a respective said application; form one or more events in response to a user interaction with one or more representations, wherein the one or more events are based on information other than application identification information originating from the server; executing, by the client, a virtual tuner on the client to manage execution of each said plurality of applications to provide respective said content represented by the guide in response to the events formed utilizing the guide, as taught by D'Souza, for the advantage of allowing a variety of desired content to be launched and played to the user independently by the system, providing a more

intuitive, versatile, and robust system having greater control and management over execution of content.

Knudson'823 and D'Souza do not explicitly teach at least one said content is television programming for receipt by the client over an internet;

the plurality of content includes remote content available over the server represented by EPG data from the server and local content available locally on the client;

said virtual tuner utilizing an application identification table that includes a listing of one or more applications to enable execution of each of said plurality of applications, the executing comprising managing a lifecycle of each said application to output respective said content represented by the EPG automatically and without the user intervention,

wherein the lifecycle includes:

launching the said application;

rendering the respective said content represented by the EPG on respective windows that are displayed on a display device, each window being utilized to display an output for the said content executed by the respective said application;

managing one or more windows that are displayed on a display device, the managing including managing place of the one or more windows displayed on the display device; and

terminating the said application.

In an analogous art Jerding'616 teaches, a virtual tuner utilizing an application identification table that includes a listing of one or more applications to enable execution of each of said plurality of applications (Col 11: lines 39-56; Col 10: lines 40-54; Col 11: lines 42-46).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Knudson'823 and D'Souza to include a virtual tuner utilizing an application identification table that includes a listing of one or more applications to enable execution of each of said plurality of applications, as taught by Jerding'616, for the advantage of better organization and efficiency for determining the appropriate applications to execute on the client.

Knudson'823, D'Souza, and Jerding'616 do not explicitly teach at least one said content is television programming for receipt by the client over an internet;

the plurality of content includes remote content available over the server represented by EPG data from the server and local content available locally on the client;

the executing comprising managing a lifecycle of each said application to output respective said content represented by the EPG automatically and without the user intervention,

wherein the lifecycle includes:

launching the said application;

rendering the respective said content represented by the EPG on respective windows that are displayed on a display device, each window being utilized to display an output for the said content executed by the respective said application;

managing one or more windows that are displayed on a display device, the managing including managing place of the one or more windows displayed on the display device; and

terminating the said application.

In an analogous art Jerding'982 teaches the executing comprising managing a lifecycle of each said application to output respective said content represented by the EPG automatically and without the user intervention (Col 3: lines 19-27, Col 4: lines 61-67 teaches a service application manager (SAM) Fig.2, 29 that handles the lifecycle of the applications to output content selected from the guide. *All this is done by the application manager without user intervention*),

wherein the lifecycle (Col 3: lines 19-27, Col 4: lines 61-67 teaches a service application manager (SAM) Fig.2, 29 that handles the lifecycle of the applications) includes:

launching the said application (Col 5: lines 5-14 teaches transferring the application call to the operation system Fig.2, 23 and SAM 29-Fig.2, and having

the desired application 25-Fig.2 execute presenting the service to the user on display 21-Fig.2. Col 3: lines 19-27 teaches a service application manager (SAM) 29-Fig.2 that handles the applications; Col 7: lines 20-28);

rendering the respective said content represented by the EPG on respective windows that are displayed on a display device, each window being utilized to display an output for the said content executed by the respective said application (Col 3: lines 19-27, Col 4: lines 61-67 teaches a service application manager (SAM) Fig.2, 29 that handles the lifecycle of the applications to output content selected from the guide. Col 7: line 40 – Col 8: line 4 teaches presenting applications in their respective windows on the display device);

managing one or more windows that are displayed on a display device, the managing including managing place of the one or more windows displayed on the display device (Col 7: line 40 – Col 8: line 4, Col 6: lines 1-8 teaches presenting applications in only a portion of the display while another service is presented in another portion of the display. The SAM Fig.2, 37 overlays the email application over the current TV program (or any existing service or application). So the email application can be overlaid on top of an underlying program in full screen mode. It is inherent that each application here has its own window for the overlaying and displaying of content. Col 3: lines 23-27 teaches that the SAM is in charge of the definition, initiation, activation and as taught in the previously cited paragraphs, applications are presented in portions of the display where the areas the application is displayed in can be defined and

managed by the definition and activation by the SAM. Applications can also displayed on top of other applications. Therefore, the SAM can manage applications to be displayed, but not solely limited to, on defined locations of the screen, as well as on top of other applications, effectively managing place of one or more windows on a display device); and

terminating the said application (Col 3: lines 23-27).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Knudson'823, D'Souza, and Jerding'616 to include the executing comprising managing a lifecycle of each said application to output respective said content represented by the EPG automatically and without the user intervention, wherein the lifecycle includes: launching the said application; rendering the respective said content represented by the EPG on respective windows that are displayed on a display device, each window being utilized to display an output for the said content executed by the respective said application; managing one or more windows that are displayed on a display device, the managing including managing place of the one or more windows displayed on the display device; and terminating the said application, as taught by Jerding'982, for the advantage of better organization and efficiency for determining the appropriate applications to execute on the client, and providing for the ability to emphasize and bring to a user's attention desired material, efficiently organizing the visual display of material for the benefit of the user in order to easily view desired material.

Knudson'823, D'Souza, Jerding'616, and Jerding'982 do not explicitly teach at least one said content is television programming for receipt by the client over an internet;

the plurality of content includes remote content available over the server represented by EPG data from the server and local content available locally on the client;

In an analogous art Houghton teaches, that the content is television programming for receipt by the client over an Internet (Paragraph 0009-0010, 0013 teaches receiving web content over communications card 121-Fig.4. The web content may be sports event or a continuous series of programming that is transmitted over the internet);

a plurality of content includes remote content available over the server represented by EPG data from the server (Paragraph 0005-0006, , 0010, 0013 teaches internet content provided by the server via the EPG).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Knudson'823, D'Souza, Jerding'616, and Jerding'982 to include at least one said content is television programming for receipt by the client over an Internet; a plurality of content includes remote content available over the server represented by EPG data from the server, as taught by Houghton, for the advantage of providing programming that might have otherwise been unavailable for which a broadcast network who has viewing rights, but decides not to broadcast the event (Houghton - Paragraph 0010).

Knudson'823, D'Souza, Jerding'616, Jerding'982, and Houghton do not explicitly teach the plurality of content includes local content available locally on the client;

In an analogous art, Hassell teaches a plurality of content includes local content available locally on the client (Paragraph 0038-0041 teaches programs stored in digital storage device Fig.3, 4 and displaying the stored programs on a selectable programs listing grid shown in Fig. 5b for selection and playback. Paragraph 0022-0023 and 0025 teaches that the digital storage device 31-Fig.2 can be contained at the set-top box 28 {client} where user equipment 22-Fig.3 is a more generalized embodiment of user equipment 22-Fig.2).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Knudson'823, D'Souza, Jerding'616, Jerding'982, and Houghton to include local content available locally on the client, as taught by Hassell, for the advantage of providing stored programming to the user that can be watched anytime and as many times desired at their own leisure.

Consider **claim 5,** Knudson'823, D'Souza, Jerding'616, Jerding'982, Houghton, and Hassel teach wherein the managing of the one or more windows includes displaying the at least one said window in a foreground of a display in response to one or more said events (Jerding'982 - Col 7: line 40 – Col 8: line 4 teaches displaying an underlying application in full screen mode and an email

application overlaid on top {foreground} by the SAM 37-Fig.2 of the full screen mode application when a selectable link is activated {events}).

Consider **claim 6,** Knudson'823, D'Souza, Jerding'616, Jerding'982, Houghton, and Hassel teach wherein said content provided by a first said application is not compatible with a second said application (D'Souza - Paragraph 0037-0038 teaches launching different applications based on the type of content that is to be played. *Therefore, only their corresponding application can play the selected content, so content that is executable by one application is not executable by another*).

Consider **claim 8,** Knudson'823, D'Souza, Jerding'616, Jerding'982, Houghton, and Hassel teach one or more computer readable-media comprising computer executable instructions that, when executed on a computer, direct the computer to perform the method of claim 1 (D'Souza - Paragraph 0022-0023).

6. **Claim 3** is rejected under 35 U.S.C. 103(a) as being unpatentable over Knudson (US 7,254,823) herein after referred to as Knudson'823, in view of D'Souza et al. (US 2006/0117348), in view of Jerding et al. (US 6,792,616) herein after referred to as Jerding'616, in view of Jerding (US 6,738,982) herein after referred to as Jerding'982, in view of Houghton et al. (US 2005/0021609), in view of Hassell et al (2007/0033615), and further in view of Hoarty et al. (6,305,020).

Consider **claim 3,** Knudson'823, D'Souza, Jerding'616, and Houghton teach launching the chosen one or more applications for outputting said content selected utilizing the EPG (D'Souza - Paragraph 0029, 0037-0038).

D'Souza, Jerding'616, and Houghton do not explicitly teach terminating the one or more applications said applications when the outputting is complete.

In an analogous art, Hoarty teaches terminating the one or more applications said applications when the outputting is complete (Col 10: lines 11-17 teaches a program managing display of content. When outputting of the content is over, the program follows the steps of call take down {termination} as described in Col 9: lines 64-11)

Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Knudson'823, D'Souza, Jerding'616, and Houghton to include terminating the one or more applications said applications when the outputting is complete, as taught by Hoarty, for the advantage of freeing up resources for subsequent use by other applications making efficient use of available resources on the system.

7. **Claims 9, 11, 13, 14, and 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Knudson (US 7,254,823) herein after referred to as Knudson'823 in view of D'Souza et al. (US 2006/0117348).

Consider **claim 9,** Knudson'823 teaches, a method comprising:

receiving a selection made from a plurality of content using an EPG that is output by the client (Col 9: lines 5-14, Col 5: lines 43-46), wherein:

the EPG includes a representation of each said content for simultaneous uidedisplay by the client (Fig.10; Col 6: lines 12-19, Col 7: line 63 - Col 8: line 6, Col 9: lines 5-14);

at least one said content is television programming (Fig.10; Col 5: lines 62-63;

providing selected content represented by the EPG (Fig.10; Col 5: lines 31-48, Col 6: lines 12-28, Col 9: lines 5-10, lines 62-67 teaches selecting and providing the content represented on the EPG);

Knudson'823 does not explicitly teach a virtual tuner executed on a client;

receiving, by the virtual tuner, a selection made from a plurality of content;

each said content is provided for output by a respective one or more of a plurality of applications;

choosing, by the virtual tuner, one or more of the plurality of applications that, when executed, provide the selected content represented by the guide, wherein the choosing is independent of any application identifying information originating from a computer distinct from the client; and

managing, by the virtual tuner, execution of the chosen one or more applications to output the selected content.

In an analogous art D'Souza teaches, a virtual tuner executed on a client; receiving, by the virtual tuner, a selection made from a plurality of content (application launcher 220-Fig.2; Paragraph 0029, 0037-0038);

each said content is provided for output by a respective one or more of a plurality of applications (Paragraph 0029-0030, 0037-0038);

choosing, by the virtual tuner, one or more of the plurality of applications that, when executed, provide the selected content represented by the guide, wherein the choosing is independent of any application identifying information originating from a computer distinct from the client (application launcher 220-Fig.2; Paragraph 0029, 0037-0038 teaches software which manages the execution of each of the applications in response to events formed utilizing the guide); and

managing, by the virtual tuner, execution of the chosen one or more applications to output the selected content (Paragraph 0029, 0037-0038).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify Knudson'823s system to include a virtual tuner executed on a client; receiving, by the virtual tuner, a selection made from a plurality of content; each said content is provided for output by a respective one or more of a plurality of applications; choosing, by the virtual tuner, one or more of the plurality of applications that, when executed, provide the selected content represented by the guide, wherein the choosing is independent of any application identifying

information originating from a computer distinct from the client; and managing, by the virtual tuner, execution of the chosen one or more applications to output the selected content, as taught by D'Souza, for the advantage of allowing a variety of desired content to be launched and played to the user independently by the system, providing a more intuitive, versatile, and robust system having greater control and management over execution of content.

Consider **claim 11,** Knudson'823 and D'Souza teach wherein the managing is performed in response to one or more events received from the EPG (D'Souza - Paragraph 0029, 0036).

Consider **claim 13,** Knudson'823 and D'Souza teach wherein said content provided by a first said application is not compatible with a second said application (D'Souza - Paragraph 0037-0038 teaches launching different applications based on the type of content that is to be played. *Therefore, only their corresponding application can play the selected content, so content that is executable by one application is not executable by another*).

Consider **claim 14,** Knudson'823 and D'Souza teach wherein: the managing includes managing one or more windows; and at least one of said window is utilized to display the selected content (D'Souza - Paragraph 0033).

Consider **claim 16,** Knudson'823 and D'Souza teach one or more computer readable-media comprising computer executable instructions that, when executed on a computer, direct the computer to perform the method of claim 9 (D'Souza - Paragraph 0022-0023).

8. **Claim 10** is rejected under 35 U.S.C. 103(a) as being unpatentable over Knudson (US 7,254,823) herein after referred to as Knudson'823, in view of D'Souza et al. (US 2006/0117348), and further in view of Hoarty et al. (6,305,020).

Consider **claim 10,** Knudson'823 and D'Souza teaches launching the chosen one or more applications for outputting the selected said content (D'Souza - Paragraph 0029, 0037-0038).

Knudson'823 and D'Souza does not explicitly teach terminating the chosen one or more applications when the outputting is completed or an event is received from the EPG.

In an analogous art, Hoarty teaches terminating the chosen one or more applications when the outputting is completed or an event is received from the EPG (Col 10: lines 11-17 teaches a program managing display of content. When outputting of the content is over, the program follows the steps of call take down {termination} as described in Col 9: lines 64-11)

Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Knudson'823 and D'Souza to include terminate the chosen one or more applications when the outputting is completed or an event is

received from the EPG, as taught by Hoarty, for the advantage of freeing up resources for subsequent use by other applications making efficient use of available resources on the system.

9. **Claim 12** is rejected under 35 U.S.C. 103(a) as being unpatentable over Knudson (US 7,254,823) herein after referred to as Knudson'823, in view of D'Souza et al. (US 2006/0117348), and further in view of Jerding (US 6,738,982) herein after referred to as Jerding'982.

Consider **claim 12,** Knudson'823 and D'Souza do not explicitly teach managing includes managing a lifecycle of the chosen one or more applications.

In an analogous art Jerding'982 teaches, managing includes managing a lifecycle of the chosen one or more applications (Col 3: lines 19-27 teaches a service application manager (SAM) Fig.2, 29 that handles the lifecycle of the applications).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Knudson'823 and D'Souza to include managing includes managing a lifecycle of the chosen one or more applications, as taught by Jerding'982, for the advantage of efficiently controlling the activation, suspension, and deletion of applications (Jerding'982 - Col 3: lines 25-27), optimizing the control and the use of resources available to the client device.

10. **Claim 15** is rejected under 35 U.S.C. 103(a) as being unpatentable over Knudson (US 7,254,823) herein after referred to as Knudson'823, in view of D'Souza et al. (US 2006/0117348), in view of Houghton et al. (US 2005/0021609), and further in view of Hassell et al (2007/0033615).

Consider **claim 15,** Knudson'823 and D'Souza teaches a plurality of content (Knudson - Col 9: lines 5-14, Col 5: lines 43-46; D'Souza - Paragraph 0027), but do not explicitly teach that it includes remote content available over the Internet and local content available locally on the client.

In an analogous art Houghton teaches, remote content available over the Internet (Paragraph 0009-0010 teaches receiving web content over communications card 121-Fig.4. The web content may be sports event or a continuous series of programming that is transmitted over the internet).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Knudson'823 and D'Souza to include remote content available over the Internet, as taught by Houghton, for the advantage of providing programming that might have otherwise been unavailable for which a broadcast network who has viewing rights, but decides not to broadcast the event (Houghton - Paragraph 0010).

Knudson'823, D'Souza, and Houghton do not explicitly teach local content available locally on the client.

In an analogous art, Hassell teaches local content available locally on the client (Paragraph 0038-0041 teaches programs stored in digital storage device

Fig.3, 4 and displaying the stored programs on a selectable programs listing grid shown in Fig. 5b for selection and playback. Paragraph 0022-0023 and 0025 teaches that the digital storage device Fig.2, 31 can be contained at the set-top box 28 [client] where user equipment Fig.3, 22 is a more generalized embodiment of user equipment Fig.2, 22).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Knudson'823, D'Souza, and Houghton to include local content available locally on the client, as taught by Hassell, for the advantage of providing stored programming to the user that can be watched anytime and as many times desired at their own leisure.

11. **Claims 25 and 27-29** are rejected under 35 U.S.C. 103(a) as being unpatentable over Knudson (US 7,254,823) herein after referred to as Knudson'823, in view of D'Souza et al. (US 2006/0117348), and further in view of Jerding et al. (US 6,792,616) herein after referred to as Jerding'616.

Consider **claim 25,** Knudson'823 teaches a client (40-Fig.1) comprising:

a processor (Col 5: lines 5-7);

a network interface, communicatively coupled to the processor, configured to provide a network connection to a wide area network (WAN) (Fig.1, Col 1:line 61 – Col 4: line 43 teaches an entire network that the receiver is connected to {WAN}. Col 4: lines 33-43 teaches one or more uni or bidirectional

communication paths to the receiver for delivery of content. *Therefore, the receiver inherently has a network interface for connecting to the outside network to receive the content via the communication path(s), and is communicatively coupled to the processor in order to receive, process, and display such content received*);

a output interface, communicatively coupled to the processor, configured to provide an output for rendering by a display device (television 48-Fig.1; Col 5: lines 31-38); and

a memory configured to maintain (Col 5: lines 5-7, Col 4: lines 33-43 teaches a processor that handles tasks associated with implementing a guide application, and the user device receiving different types of information, *therefore, the user device inherently has some sort of memory to store information and instructions to implement a guide application*):

an EPG engine that is executable on the processor to provide an EPG for output on the output interface (Col 5: lines 5-7 teaches a program guide application handled and implemented by the processor. Col 5: lines 31-38 teaches presenting the program guide on the television 48-Fig.1), wherein the EPG simultaneously displays a plurality of representations of said content for selection (Fig.10; Col 6: lines 12-19, Col 7: line 63 - Col 8: line 6, Col 9: lines 5-14); and

selection of said content represented by the EPG (Fig.10; Col 5: lines 31-48, Col 6: lines 12-28, Col 9: lines 5-10, lines 62-67 teaches selecting and providing the content represented on the EPG);

Knudson'823 does not explicitly teach a plurality of applications that are executable on the processor to provide an output of content on the output interface, wherein at least one said content is television programming received at the network interface;

a virtual tuner that is executable on the processor to launch one or more of said plurality of applications in response to selection of said content represented by the guide, independent of any application identifying information originating from a computer distinct from the client, said virtual tuner utilizing an application identification table that includes a listing of one or more applications to enable execution of each of said plurality of applications.

In an analogous art D'Souza teaches, memory (memory 212-Fig.2) configured to maintain:

a plurality of applications that are executable on the processor to provide an output of content on the output interface, wherein at least one said content is television programming received at the network interface (Software programs 214, 216, 218, 220 – Fig.2; Paragraph 0021 teaches receiving video programming via network interface 208-Fig.2; Paragraph 0029-0030, 0037-0038 teaches different applications that may be executed to provide content outputted

to the display device for display to the client, where the content can be video programming);

a virtual tuner that is executable on the processor to launch one or more of said plurality of applications in response to selection of said content using the guide, independent of any application identifying information originating from a computer distinct from the client (application launcher 220-Fig.2; Paragraph 0029, 0037-0038 teaches software which manages the execution of each of the applications in response to selection of content utilizing the guide),

Therefore, it would have been obvious to a person of ordinary skill in the art to modify Knudson'823s system to include the client includes a plurality of applications that are executable on the processor to provide an output of content on the output interface, wherein at least one said content is television programming received at the network interface; a virtual tuner that is executable on the processor to launch one or more of said plurality of applications in response to selection of said content using the guide, independent of any application identifying information originating from a computer distinct from the client, as taught by D'Souza, for the advantage of allowing a variety of desired content to be launched and played to the user independently by the system, providing a more intuitive, versatile, and robust system having greater control and management over execution of content.

Knudson'823 and D'Souza do not explicitly teach said virtual tuner utilizing an application identification table that includes a listing of one or more applications to enable execution of each of said plurality of applications.

In an analogous art Jerding'616 teaches, a virtual tuner utilizing an application identification table that includes a listing of one or more applications to enable execution of each of said plurality of applications (Col 11: lines 39-56; Col 10: lines 40-54; Col 11: lines 42-46).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Knudson'823 and D'Souza to include a virtual tuner utilizing an application identification table that includes a listing of one or more applications to enable execution of each of said plurality of applications, as taught by Jerding'616, for the advantage of better organization and efficiency for determining the appropriate applications to execute on the client.

Consider **claim 27,** Knudson'823, D'Souza, and Jerding'616 teach manage one or more windows corresponding to the plurality of applications; and at least one of said window includes display of the selected said content (D'Souza - Paragraph 0033).

Consider **claim 28,** Knudson'823, D'Souza, and Jerding'616 teach the network interface is configured as a tuner for receiving one or more broadcasts of

the television programming over the WAN; and the WAN is configured as a broadcast network (Knudson – Col 4: lines 33-52; D'Souza - Paragraph 0020-0021 teaches multiple customer set top boxes connected to the distribution network where they receive audio, video, and other types of data sent by the headend).

Consider **claim 29,** Knudson'823, D'Souza, and Jerding'616 teach wherein the content provided by a first said application is not compatible with a second said application (D'Souza - Paragraph 0037-0038 teaches launching different applications based on the type of content that is to be played. *Therefore, only their corresponding application can play the selected content, so content that is executable by one application is not executable by another*).

12. **Claim 26** is rejected under 35 U.S.C. 103(a) as being unpatentable over Knudson (US 7,254,823) herein after referred to as Knudson'823, in view of D'Souza et al. (US 2006/0117348), in view of Jerding et al. (US 6,792,616) herein after referred to as Jerding'616, and further in view of Jerding (US 6,738,982) herein after referred to as Jerding'982.

Consider **claim 26,** Knudson'823, D'Souza, and Jerding'616 teach do not explicitly teach wherein the virtual tuner is further executable to terminate execution of the one or more said applications.

In an analogous art Jerding'982 teaches, wherein a virtual tuner is further executable to terminate execution of the one or more said applications (erding'982 - Col 3: lines 19-27 teaches service application manager (SAM) Fig.2, 29 that handles the lifecycle of applications on the system, including suspension and deletion of services).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Knudson'823, D'Souza, and Jerding'616 to include wherein a virtual tuner is further executable to terminate execution of the one or more said applications, as taught by Jerding'982, for the advantage of efficiently controlling the activation, suspension, and deletion of applications (Jerding'982 - Col 3: lines 25-27), optimizing the control and the use of resources available to the client device in order to save system resources.

13. **Claim 30** is rejected under 35 U.S.C. 103(a) as being unpatentable over Knudson (US 7,254,823) herein after referred to as Knudson'823, in view of D'Souza et al. (US 2006/0117348), in view of Jerding et al. (US 6,792,616) herein after referred to as Jerding'616, and further in view of Knudson et al. (6,526,577) herein after referred to as Knudson'577.

Consider **claim 30,** Knudson'823, D'Souza and Jerding'616 do not explicitly wherein the WAN is the Internet.

In an analogous art, Knudson teaches a WAN is the Internet (Col 5: lines 34-50 teaches video signals, e.g. television programs, that is distributed over

communications path Fig.2c, 20. Communications path 20 may be an Internet link).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Knudson'823, D'Souza, and Jerding'616 to have the WAN as the internet, as taught by Knudson, for the advantage of providing programming to users that might otherwise be unable to receive programming over the air and do not have cable.

14. **Claim 31** is rejected under 35 U.S.C. 103(a) as being unpatentable over Knudson (US 7,254,823) herein after referred to as Knudson'823, in view of D'Souza et al. (US 2006/0117348), in view of Jerding et al. (US 6,792,616) herein after referred to as Jerding'616, and further in view of Hassell et al (2007/0033615).

Consider **claim 31,** Knudson'823, D'Souza, and Jerding'616 teach wherein the content includes remote content available over the WAN (D'Souza - Paragraph 0021, 0027), but does not explicitly teach local content available locally on the client.

In an analogous art, Hassell teaches local content available locally on the client (Paragraph 0038-0041 teaches programs stored in digital storage device Fig.3, 4 and displaying the stored programs on a selectable programs listing grid shown in Fig. 5b for selection and playback. Paragraph 0022-0023 and 0025 teaches that the digital storage device Fig.2, 31 can be contained at the set-top

box 28 [client] where user equipment Fig.3, 22 is a more generalized embodiment of user equipment Fig.2, 22).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Knudson'823, D'Souza, and Jerding'616 to include local content available locally on the client, as taught by Hassell, for the advantage of providing stored programming to the user that can be watched anytime and as many times desired at their own leisure.

15. **Claims 32 and 37** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hassell et al. (US 2007/0033615), in view of D'Souza et al. (US 2006/0117348), and further in view of Jerding et al. (US 6,792,616) herein after referred to as Jerding'616.

Consider **claim 32,** Hassel teaches a system comprising:

a network (Fig.1; Paragraph 0017-0019);

an EPG provider communicatively coupled to the network including remote EPG data that describes remote content that is available over the network, the remote content including television programming (Fig.1; Paragraph 0017-0019);

a client communicatively coupled to the network (Fig.1; Paragraph 0017-0019 teaches receiving information from the network, *therefore it is communicatively coupled to the network*); and including:

one or more processors and application that is executable thereon to provide at least one of local content and the remote content for rendering on a display device, wherein the EPG includes a plurality of representations, and wherein at least one said representation represents the remote content and another said representation represents the local content (Paragraph 0024-0027 teaches processing circuitry that instructs a program guide implemented on user equipment to generate a program guide display screen. Fig.5b, Paragraph 0038 teaches program listings that indicates currently stored program on a storage device {local content} and program listings indicating other television programs {remote content}. Paragraph 0022 teaches that the storage device can be contained in set-top box 28-Fig.2. Paragraph 0041 teaches that the user may select a stored program {local content} for playback and Paragraph 0026 teaches allowing a user to watch television from a desired television channel {remote content} on monitor 45-Fig.3); and

local EPG data that describes the local content (Paragraph 0038 teaches program listings that indicates currently stored programs on a storage device. Paragraph 0022 teaches that the storage device can be contained in set-top box 28-Fig.2);

a guide application that is executable to generate an EPG from the remote and local EPG content that is configured to initiate one or more events, the remote and local EPG content simultaneously displayed by the EPG, and wherein the guide application is further executable to generate the local EPG

data by examining the client (Fig.5b; Paragraph 0038-0040 teaches an EPG containing programs from storage device and programs from outside sources. Paragraph 0041 teaches a user selecting a stored program listing and the EPG issuing commands in response to the selection. Paragraph 0021 teaches storing directory information about the content stored on the storage device, and paragraph 0038. *In order for the directory information of available stored program(s) to be shown, the guide application must examine the client first in order to retrieve the necessary information to generate the guide*); and

selection of said content represented by the EPG (Fig.10; Col 5: lines 31-48, Col 6: lines 12-28, Col 9: lines 5-10, lines 62-67 teaches selecting and providing the content represented on the EPG);

Hassel does not explicitly teach a plurality of applications that are executable thereon, wherein said content provided by a first said application is not compatible with a second said application; and

a virtual tuner that is executable to manage one or more said plurality of applications in response to selection of said content represented by the guide, said virtual tuner utilizing an application identification table that includes a listing of one or more applications to enable execution of each of the plurality of applications independent of any application identifying information originating from a computer distinct from the client.

In an analogous art D'Souza teaches, a plurality of applications that are executable thereon, wherein said content provided by a first said application is not compatible with a second said application (Software programs 214, 216, 218, 220 – Fig.2; Paragraph 0021 teaches receiving video programming via network interface 208-Fig.2; Paragraph 0029-0030, 0037-0038 teaches different applications that may be executed to provide content outputted to the display device for display to the client, where the content can be video programming. Paragraph 0022 teaches OS software in addition to various application software that are executed on set top terminal 202-Fig.2. *The fact that multiple applications are needed to launch different types of content and the content is first checked to determine what type of content it is prior to choosing the correct application to launch it, means that content that is provided by a first application is not compatible with a second application*); and

a virtual tuner that is executable to manage one or more said plurality of applications in response to selection of said content represented by the guide (application launcher 220-Fig.2; Paragraph 0029, 0037-0038 teaches software which manages the execution of each of the applications in response to events formed utilizing the guide), independent of any application identifying information originating from a computer distinct from the client (application launcher 220-Fig.2; Paragraph 0029, 0037-0038 teaches software which manages the execution of each of the applications in response to selection of content utilizing the guide).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify Hassel's system to include a plurality of applications that are executable thereon, wherein said content provided by a first said application is not compatible with a second said application; and a virtual tuner that is executable to manage one or more said plurality of applications in response to selection of said content represented by the guide, independent of any application identifying information originating from a computer distinct from the client, as taught by D'Souza, for the advantage of allowing a variety of desired content to be launched and played to the user independently by the system, providing a more intuitive, versatile, and robust system having greater control and management over execution of content.

Hassel and D'Souza do not explicitly teach said virtual tuner utilizing an application identification table that includes a listing of one or more applications to enable execution of each of the plurality of applications.

In an analogous art Jerding'616 teaches, a virtual tuner utilizing an application identification table that includes a listing of one or more applications to enable execution of each of the plurality of applications (Col 11: lines 39-56; Col 10: lines 40-54; Col 11: lines 42-46).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Hassel and D'Souza to include a virtual tuner utilizing an application identification table that includes a listing of one or more applications to enable execution of each of the plurality of applications, as taught

by Jerding'616, for the advantage of better organization and efficiency for determining the appropriate applications to execute on the client.

Consider **claim 37,** Hassel, D'Souza, Jerding'616, and Hassell teach manages one or more windows that include a display of at least one of local and remote content (D'Souza - Paragraph 0033; Hassell - Fig.5b; Paragraph 0038-0041 teaches an EPG containing programs from storage device and programs from outside sources where upon selection can be displayed for play for the user).

16. **Claim 33** is rejected under 35 U.S.C. 103(a) as being unpatentable over Hassell et al. (US 2007/0033615), in view of D'Souza et al. (US 2006/0117348), in view of Jerding et al. (US 6,792,616) herein after referred to as Jerding'616, and further in view of Hoarty et al. (6,305,020).

Consider **claim 33,** Hassel, D'Souza, and Jerding'616 teach launching one or more of the plurality of applications to process at least one of the local and remote content (Hassell - Fig.5b; Paragraph 0038-0040 teaches an EPG containing programs from storage device and programs from outside sources. Paragraph 0041 teaches a user selecting a stored program listing and the EPG issuing commands in response to the selection; D'Souza - Paragraph 0029, 0037-0038; Paragraph 000021).

Hassel, D'Souza, and Jerding'616 do not explicitly teach terminating the one or more applications when the provision of the content is completed.

In an analogous art, Hoarty teaches terminating the one or more applications when the provision of the content is completed (Col 10: lines 11-17 teaches a program managing display of content. When outputting of the content is over, the program follows the steps of call take down {termination} as described in col 9: lines 64-11)

Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Hassel, D'Souza, and Jerding'616 to include terminating the one or more applications when the provision of the content is completed, as taught by Hoarty, for the advantage of freeing up resources for subsequent use by other applications making efficient use of available resources on the system.

17. **Claim 36** is rejected under 35 U.S.C. 103(a) as being unpatentable over Hassell et al. (US 2007/0033615), in view of D'Souza et al. (US 2006/0117348), in view of Jerding et al. (US 6,792,616) herein after referred to as Jerding'616, and further in view of Jerding (US 6,738,982) herein after referred to as Jerding'982.

Consider **claim 36,** Hassel, D'Souza, and Jerding'616 do not explicitly teach wherein the virtual tuner manages a lifecycle of each said application.

In an analogous art Jerding'982 teaches, manage a lifecycle of each said application (Col 3: lines 19-27 teaches a service application manager (SAM) Fig.2, 29 that handles the lifecycle of the applications).

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the system of Hassel, D'Souza, and Jerding'616 to include manage a lifecycle of each said application, as taught by Jerding'982, for the advantage of efficiently controlling the activation, suspension, and deletion of applications (Jerding'982 - Col 3: lines 25-27), optimizing the control and the use of resources available to the client device.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON K. LIN whose telephone number is (571)270-1446. The examiner can normally be reached on Mon-Fri, 9:00AM-6:00PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian T. Pendleton can be reached on (571)272-7527. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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